

What is claimed is:

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1. An antimicrobial copolymer obtainable by copolymerizing (component I) aliphatically unsaturated monomers which have been functionalized by means of an ester group and at least singly functionalized by means of a tertiary amino group with (component II) another aliphatically unsaturated monomer which has been at least singly functionalized by means of an amino group, where component I and component II are different from one another.
- 10 2. The antimicrobial copolymer as claimed in claim 1,
wherein
component II is composed of aliphatically unsaturated monomers which have been at least singly functionalized by means of a tertiary amino group.
- 15 3. The antimicrobial copolymer as claimed in claim 1 or 2,
wherein
component I is composed of aliphatically unsaturated monomers whose ester group has been at least singly functionalized by means of an amino group.
- 20 4. The antimicrobial copolymer as claimed in one of claims 1 to 3,
wherein
component I is composed of acrylate or methacrylates which have been at least singly functionalized by means of a tertiary amino group.
- 25 5. The antimicrobial polymer as claimed in one of claims 1 to 4,
wherein
each of components I and II is an aliphatically unsaturated monomer functionalized by means of a tertiary amino group and having the general formula

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where R^1 : is a branched, unbranched or cyclic, saturated or

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unsaturated hydrocarbon radical having up to 50 carbon atoms which may have substitution by O atoms, N atoms or S atoms, and

R² and R³ are branched, unbranched or cyclic, saturated or unsaturated hydrocarbon radicals having up to 25 carbon atoms, which may have substitution by O atoms, N atoms or S atoms, where R² and R³ are identical or different,

with the proviso that R¹ in monomers of component I contains an ester group.

10 6. The antimicrobial coating made from antimicrobial copolymers as claimed in one of claims 1 to 5,

wherein

the copolymerization is carried out on a substrate.

15 7. The antimicrobial coating made from antimicrobial copolymers as claimed in one of claims 1 to 5,

wherein

the copolymerization is carried out as a graft polymerization of a substrate.

20 8. The antimicrobial coating as claimed in claim 7,

wherein

the substrate is activated prior to the graft polymerization by UV radiation, plasma treatment, corona treatment, flame treatment, ozonization, electrical discharge or γ -radiation.

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9. The antimicrobial coating as claimed in claim 7,

wherein

the substrate is activated prior to the graft polymerization by UV radiation with a photoinitiator.

50° A₂ > 30

10. A process for preparing antimicrobial copolymers by copolymerizing (component I) aliphatically unsaturated monomers which have been functionalized by means

of an ester group and a tertiary amino group with (component II) another aliphatically unsaturated monomer which has been at least singly functionalized by means of an amino group, where components I and II are different from one another.

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11. The process as claimed in claim 10,

wherein

component II is composed of aliphatically unsaturated monomers which have been at least singly functionalized by means of a tertiary amino group.

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12. The process as claimed in claim 10 or 11,

wherein

component I is composed of aliphatically unsaturated monomers whose ester group has been at least singly functionalized by means of an amino group.

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13. The process as claimed in one of claims 10 to 12,

wherein

component I is composed of acrylate or methacrylates which have been at least singly functionalized by means of a tertiary amino group.

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14. The process as claimed in one of claims 10 to 13,

wherein

each of components I and II is an aliphatically unsaturated monomer functionalized by means of a tertiary amino group and having the general formula

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where R^1 : is a branched, unbranched or cyclic, saturated or unsaturated hydrocarbon radical having up to 50 carbon atoms which may have substitution by O atoms, N atoms or S atoms, and

R^2 and R^3 : are branched, unbranched or cyclic, saturated or unsaturated hydrocarbon radicals having up to 25 carbon atoms, which

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may have substitution by O atoms, N atoms or S atoms, where
R² and R³ are identical or different,

with the proviso that R¹ in monomers of component I contains an ester group.

5 15. The process as claimed in one of claims 10 to 14,

wherein

the copolymerization is carried out on a substrate.

10 16. The process as claimed in one of claims 10 to 15,

wherein

the copolymerization is carried out as a graft polymerization of a substrate.

15 17. The process as claimed in claim 16,

wherein

the substrate is activated prior to the graft polymerization by UV radiation, plasma treatment, Corona treatment, flame treatment, ozonization, electrical discharge or γ -radiation.

20 18. The process as claimed in claim 17,

wherein

the substrate is activated prior to the graft polymerization by UV radiation with a photoinitiator.

25 19. The use of the antimicrobial copolymers as claimed in one of claims 1 to 9 for producing products with an antimicrobial coating comprising the copolymer.

30 20. The use of the antimicrobial polymers as claimed in one of claims 1 to 9 for producing items in medical technology with an antimicrobial coating comprising the copolymer.

21. The use of the antimicrobial copolymers as claimed in one of claims 1 to 9 for producing hygiene items with an antimicrobial coating comprising the copolymer.

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22. The use of the antimicrobial copolymers as claimed in one of claims 1 to 9 in surface coatings, protective paints or in other coatings.

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